

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-12 (Canceled).

Claim ~~13~~¹³ (New): An irradiation device for a target, by a charged hadron beam, produced by means for generating a charged hadron beam, the device comprising:

corpuscular optics means for making transverse density of the charged hadron beam uniform, along at least one direction perpendicular to a trajectory of the charged hadron beam; and

means for three-dimensional control of irradiation of the target by the charged hadron beam,

wherein the three dimensional control means includes:

means for adjusting energy of generated charged hadrons, and

scanning means for displacing the charged hadron beam to make it scan the target along a narrow substantially rectangular band, and for causing the center of the narrow band to follow a median line while lengthening or shortening the narrow band to follow contours of the target.

Claim ~~14~~¹⁴ (New): A device according to claim 13, wherein the corpuscular optics means comprises at least one non-linear corpuscular optics lens.

Claim ~~15~~¹⁵ (New): A device according to claim 13, wherein the corpuscular optics means includes two non-linear corpuscular optics lenses configured to make the transverse density of the charged hadron beam uniform, along two directions perpendicular to each other and to the trajectory of the charged hadron beam.

Claim ¹⁴~~16~~ (New): A device according to claim 14, wherein each non-linear corpuscular optics lens is $2n$ -polar, where $2n$ is an integer equal to at least 8.

Claim ¹⁵~~17~~ (New): A device according to claim 13, wherein the scanning means includes a pair of magnetic dipoles.

Claim ¹⁶~~18~~ (New): A device according to claim 13, wherein the charged hadron beam generation means comprises a synchrotron and the means for adjusting the energy of the generated charged hadrons are means of adjusting the energy of the charged hadrons produced by the synchrotron.

Claim ¹⁷~~19~~ (New): A device according to claim 13, wherein the means for generation of the charged hadron beam comprises a cyclotron and the means for adjusting the energy of the generated charged hadrons includes moment analysis means.

Claim ¹⁸~~20~~ (New): A device according to claim 13, wherein the corpuscular optics means are capable of varying uniformization of transverse density of the charged hadron beam depending on a length and/or a width of the narrow band.

Claim ¹⁹~~21~~ (New): A device according to claim 12, wherein the scanning means is capable of making the charged hadron beam scan the target at predetermined depths of the target, a plurality of times for each of the depths, a dose delivered to the target each time being equal to a total dose required for the depth, divided by the number of times.

Claim ²⁰~~22~~ (New): A device according to claim 13, wherein the charged hadrons are light nuclei.

Claim ²¹~~23~~ (New): A device according to claim 15, wherein each non-linear corpuscular optics lens is $2n$ -polar, where $2n$ is an integer equal to at least 8.